

## ABSTRACT OF THE DISCLOSURE

A method of forming a capacitor includes forming a conductive metal first electrode layer over a substrate, with the conductive metal being oxidizable to a higher degree at and above an oxidation temperature as compared to any degree of oxidation below the oxidation temperature. At least one oxygen containing vapor precursor is fed to the conductive metal first electrode layer below the oxidation temperature under conditions effective to form a first portion oxide material of a capacitor dielectric region over the conductive metal first electrode layer. At least one vapor precursor is fed over the first portion at a temperature above the oxidation temperature effective to form a second portion oxide material of the capacitor dielectric region over the first portion. The oxide material of the first portion and the oxide material of the second portion are common in chemical composition. A conductive second electrode layer is formed over the second portion oxide material of the capacitor dielectric region.